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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/402,646	01/10/2000	MAURI TIKKA	PM264179	6243

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EXAMINER

PEREZ GUTIERREZ, RAFAEL

ART UNIT	PAPER NUMBER
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2683

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DATE MAILED: 02/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/402,646**

Applicant(s)  
**Tikka**

Examiner  
**Rafael Perez-Gutierrez**

Art Unit  
**2683**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 10, 2000
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jan 10, 2000 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5 6) ☐ Other:

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## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement submitted on October 8, 1999 has been considered by the Examiner and made of record in the application file.

### ***Specification***

3. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

### ***Claim Objections***

4. **Claims 4, 5, and 7-9** are objected to because of the following informalities:
  - a) On **line 1 of claims 4 and 9**, replace “comprising” with --comprising:--;
  - b) On **lines 2 and 5 of claim 5** and on **lines 2 and 4 of claims 7 and 8**, replace “are” with

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--is-- before “arranged”; and

c) On **line 5** of **claim 7**, replace “(BTS1 to BTS3)” with --(MS1 to MS3)--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-3** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

**Claim 1** recites the limitation “the other parts of the system” in **line 9**. There is insufficient antecedent basis for this limitation since there is no previous reference to or support for multiple or different parts of the system in the claim. Additionally, this limitation renders the claim indefinite because it is not clear to which parts of the system the telecommunication signals are being transmitted, more seldom or more often, by the mobile station. It appears that some critical step is missing from the claim.

For purposes of applying prior art, this recitation is being examined as --the mobile station transmits telecommunication signals to the system more seldom or more often than before --.

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**Claim 2** recites the limitation “said control means” in **line 2**. There is insufficient antecedent basis for this limitation in the claim. For purposes of applying prior art, the recitation of “control means” is being examined as --regulation means--.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless -(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the Applicant for a patent.

**Claims 1, 2, and 9** are rejected under 35 U.S.C. 102(a) as being anticipated by **Suwanen et al. (WO 96/42142)**.

Consider **claim 1**, Suwanen et al. clearly show and disclose a method for controlling the capacity (load) in a mobile communication system in a system in which the mobile stations (MSs) (only one being shown) comprise means for utilizing discontinuous transmission (combination of speech encoder 22, TXDTX 23, and voice activity detector (VAD) 25) (figure 2 and page 13 lines 11-19), characterized in that

at least one MS is equipped with regulation means (combination of TXDTX 23 and voice activity detector (VAD) 25) for regulating its parameters related to discontinuous transmission (figure 2 and page 13 line 20 - page 15 line 30); and

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a command (control signal) is transmitted via a radio path to said at least one MS for regulating its parameters related to discontinuous transmission in such a manner that the mobile station transmits telecommunication signals to the system more seldom or more often than before (figure 2 and page 13 line 20 - page 15 line 30).

Consider **claim 2**, and **as applied to claim 1 above**, Suvanén et al. further disclose that the command (control signal) is provided to the regulation means (combination of TXDTX 23 and voice activity detector (VAD) 25) for regulating at least those parameters related to discontinuous transmission on the basis of which the MS can discriminate between speech conveyed to a microphone 21 and background noise in such a manner that the MS interprets the noise arriving at the microphone 21 as background noise more easily than before (figure 2 and page 13 line 20 - page 15 line 30).

Consider **claim 9**, Suvanén et al. clearly show and disclose a mobile station (MS) comprising:

a radio unit 24 (transmission means (TX) and reception means (RX)) for receiving and transmitting telecommunications signals via a radio path (figure 2, page 13 line 33 - page 14 line 3, and page 15 line 32 - page 16 line 2);

a microphone 21 (user interface) for receiving an acoustic sound (e.g., voice signals) (figure 2, page 13 lines 23-25, and page 14 lines 6-9); and

control means (TXDTX) (combination of speech encoder 22, TXDTX 23, and voice activity detector (VAD) 25) for utilizing discontinuous transmission, whereby the control means

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(TXDTX) (combination of speech encoder 22, TXDTX 23, and voice activity detector (VAD) 25) comprise a voice activity detector (VAD) 25 (signal processing means) for processing the voice signals received through the microphone 21 (user interface) by utilizing parameters stored in the MS in order to detect speech from the voice signals received through the microphone 21 (user interface) (page 13 line 23 - page 15 line 17), characterized in that the MS comprises:

detection means (not shown) for detecting a command (predetermined control signal (CNT)) received by the radio unit 24 (transmission means (TX) and reception means (RX)) via the radio path (figure 2 and page 14 lines 4 and 5); and

regulation means (combination of TXDTX 23 and voice activity detector (VAD) 25), responsive to the detection means (not shown), for changing said parameters utilized in speech detection in such a manner that the voice activity detector (VAD) 25 (signal processing means) interpret the voice signals received through the microphone 21 (user interface) as background noise more seldom or more often than before (figure 2 and page 13 line 20 - page 15 line 30).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be

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negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 3-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Suwanen et al. (WO 96/42142)** in view of **Kokko et al. (U.S. Patent # 5,790,534)**.

Consider **claim 3**, and **as applied to claims 1 and 2 above**, Suwanen et al. suggest that the interference level (traffic load) in the radio path is monitored, however, they do not specifically disclose that the traffic load in different parts of the mobile communication system is monitored and said command (control signal) is transmitted to certain MSs or MSs in a certain area, when the traffic load in some part of the system exceeds a predetermined limit, whereby said MSs that have received the command (control signal) regulate their parameters related to discontinuous transmission in such a manner that they transmit telecommunication signals to the other parts of the system more seldom than before.

Kokko et al. clearly show and disclose a CDMA cellular system (mobile communication system) and a load control method for said system in which the traffic load in different parts of



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the system is monitored, by a load monitor 14B (figure 1), and a transmission prohibition (control signal) is transmitted to certain mobile stations 12 (MSs) or MSs in a certain area, when the traffic load in some part of the system exceeds a predetermined limit, whereby said MSs that have received the transmission prohibition (control signal) regulate their parameters related to discontinuous transmission in such a manner that they transmit telecommunication signals to the other parts of the system more seldom than before (column 6 lines 24-43, column 6 line 65 - column 7 line 7, column 7 line 48 - column 8 line 7, and column 10 lines 52-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the load monitor 14B taught by Kokko et al. in the system and method of Suvanen et al. in order to control the load of the system in accordance with the traffic load in different parts of the system. The motivation to do so would have been to optimized the load of the system and to efficiently manage the resources available in the system.

Consider **claim 4**, and **as applied to claims 1, 3, and 9 above**, Suvanen et al. further show and disclose that the mobile communication system comprises:

- a mobile switching centre (exchange) (MSC) (figure 1);
- base station systems (BSS) in data transmission connection to the MSC (figure 1); and
- mobile stations MSs in a radio connection to the base stations and comprising means for utilizing discontinuous transmission (combination of speech encoder 22, TXDTX 23, and voice activity detector (VAD) 25) (figures 1 and 2), characterized in that the system comprises mobile stations MSs comprising regulation means (combination of TXDTX 23 and voice

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activity detector (VAD) 25) for regulating their parameters related to discontinuous transmission in response to a command (control signal) in such a manner that said MSs transmit telecommunication signals to the system more seldom or more often than before (figures 1 and 2 and page 13 line 20 - page 15 line 30).

However, Suvanen et al. do not specifically disclose that the system comprises monitoring means for monitoring the load in different parts of the system and that said command (control signal) is transmitted by the BSS to certain MSs or MSs in a certain area, when the monitoring means indicate that the traffic load in some part of the system exceeds a predetermined limit.

Kokko et al. clearly show and disclose a CDMA cellular system (mobile communication system) in which the traffic load in different parts of the system is monitored, by a load monitor 14B (monitoring means) (figure 1), and a transmission prohibition (control signal) is transmitted by a base station 14, to certain MSs or MSs in a certain area, when the traffic load in some part of the system exceeds a predetermined limit (column 6 lines 24-43, column 6 line 65 - column 7 line 7, column 7 line 48 - column 8 line 7, and column 10 lines 52-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the load monitor 14B taught by Kokko et al. in the system and of Suvanen et al. in order to control the load of the system in accordance with the traffic load in different parts of the system. The motivation to do so would have been to optimized the load of the system and to efficiently manage the resources available in the system.

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Consider **claims 5-7**, and **as applied to claim 4 above**, Kokko et al. also disclose that the load monitor 14B (monitoring means) (figure 1) is arranged to monitor the amount of available resources (free traffic capacity) of either a certain base station 14 or a packet switched data transmission connection between at least one base station 14 and a MSC, via base station controller 16, belonging to the system, whereby the transmission prohibition (control signal) is transmitted by the base station 14, to all MSs from a which a traffic connection is in progress via said base station 14 when the amount of available resources is below the predetermined limit value (column 6 lines 24-43, column 6 line 65 - column 7 line 7, column 7 line 48 - column 8 line 7, and column 10 lines 52-67).

Consider **claim 8**, and **as applied to claims 4-7 above**, Kokko et al. further disclose that the quality of traffic channels of a certain base station 14 is monitored and the transmission prohibition (control signal) is transmitted by the base station 14, to all MSs from a which a traffic connection is in progress via said base station 14 when the quality of the traffic channels is below a predetermined limit (column 7 line 48 - column 8 line 7).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Jamal (U.S. Patent # 5,754,537) discloses a method and system for transmitting

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background noise data;

Davis et al. (U.S. Patent # 5,835,486) disclose a multi-channel transcoder rate adapter having low delay and integral echo cancellation;

Lehtimäki (U.S. Patent # 5,953,666) discloses a digital mobile communication system.

10. Any response to this Office Action should be **faxed to (703) 872-9314 or mailed to:**

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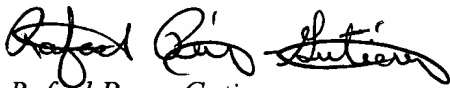
Crystal Park II  
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Arlington, VA 22202  
Sixth Floor (Receptionist)

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, William G. Trost IV can be reached on (703) 308-5318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.



*Rafael Perez-Gutierrez*

R.P.G./rpg **RAFAEL PEREZ-GUTIERREZ**  
**PATENT EXAMINER**

February 3, 2003



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